

REMARKS

Claims 1-20 are pending in the application, of which, claims 1, 14 and 18 are independent.

Claims 1-4, 5, 8-14, 15, 17-20 are rejected over U.S. Pat. No. 4,463,709 to Pluequet (Pluequet) in view of U.S. Pat. No. 5,619,956 to Koziara et al. (Koziara). Claims 7 and 16 are rejected over Koziara in view of U.S. Pat. No. 5,873,330 to Takahashi et al. (Takahashi). Applicants respectfully traverse these rejections for at least the following reasons.

Pluequet discloses an exhaust gas conduit system of simplified construction having an exhaust manifold with longitudinal water chambers formed by the walls of an insulating wall and ribs for support. The exhaust manifold of Pluequet includes liquid coolant passages, but does not show a catalytic conversion element disposed within the manifold. Koziara discloses a catalytic conversion element positioned in the ventilation outlet duct 154 of an enclosure 150 surrounded by an acoustical material 602, but does not disclose an exhaust manifold cooling jacket housing which define coolant passages. See Koziara, col. 8, lines 28-34 and FIG. 6A. In other words, Pluequet discloses a liquid-cooled manifold and Koziara discloses an exemplary catalyst employed to reduce emissions.

Accordingly, Koziara fails to cure the deficiencies of Pluequet. Neither reference provides any suggestion or motivation for placing a catalytic conversion element, known in the art to require relatively high temperatures to effectively promote the combustion of combustible exhaust gases, within a manifold that is liquid cooled so as to avoid relatively high surface temperatures. As provided in the Specification, "[b]y disposing the conversion catalyst within the manifold itself, relatively close to the exhaust source, the high temperature developed by secondary combustion are safely contained within a liquid-cooled housing so as to not present any exposed high temperature surfaces." See Specification, p. 6, lines 15-19. Applicant respectfully submits there is no suggestion either in the Koziara and Pluequet references

themselves or in the knowledge generally available to one of ordinary skill to move a catalytic conversion element that is normally housed so as to allow high temperature operation, to within a liquid-cooled exhaust manifold.

The liquid-cooling of a catalyst disposed within the housing of an exhaust manifold is not suggested by either of these references, and contrary to typical practice. "If when combined, the references 'would produce a seemingly inoperative device,' then they teach away from their combination." Tec Air, Inc. v. Denso Manufacturing Michigan Inc., 192 F. 3d 1353, 52 USPQ2d 1294 (Fed. Cir. 1999) citing In re Sponnoble, 405 F.2d 578, 587, 160 USPQ 237 (CCPA 1969). Proceeding contrary to the accepted wisdom in the prior must be taken into account in determining obviousness. Moreover, "[t]he totality of the prior art must be considered and proceeding contrary to accepted wisdom in the art is evidence of nonobviousness." In re Hedges, 783 F.2d 1038, 228 USPQ 685 (Fed. Cir. 1986); MPEP § 2145. It is insufficient to establish obviousness that the separate elements of the invention existed in the prior art, absent some teaching or suggestion the prior art, to combine the elements. See generally Arkie Lures, Inc. v. Gene Larew Tackle, Inc., 119 F.3d 953, 43 USPQ2d 1294 (Fed. Cir. 1997).

For at least the same reasons described above, Applicants submits that claims 7 and 16 are patentable in that Takahashi fails to cure the deficiencies of Koziara. Applicant submits that for at least the same reasons, all claims depending from independent claims 1, 14 and 18 are allowable as well.

Should the above remarks be found unpersuasive, or if there remain any other substantive issues affecting allowability, Applicant respectfully requests that the undersigned attorney be granted an opportunity for a substantive telephone interview with the Examiner before any revised office action is issued.

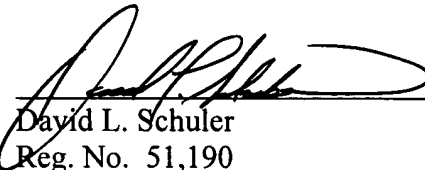
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Enclosed is a \$510 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050, with reference to Attorney Docket No. 00637-025001.

Respectfully submitted,

Date: 6/1/2005

  
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